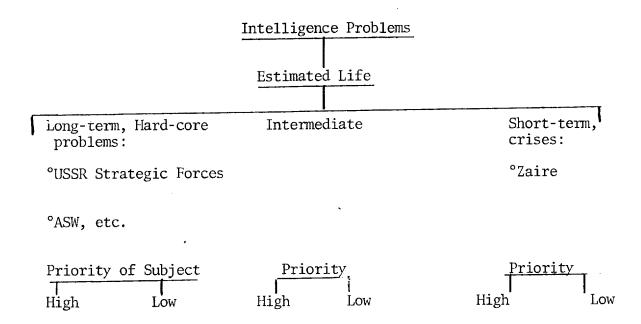
#### A Theoretical Framework for Viewing the

Development of Production and Collection Strategies

Given: A full spectrum of intelligence problems, ranging from those of long-term duration to the short-term crisis. Each will have a priority independent of its estimated time dimension.



All intelligence problems can be viewed in terms of an estimated duration of interest that will bear on the development of an appropriate production/collection strategy. This will be independent of the priority or criticalness of the subject matter in terms of US security. A long-term, hard-core problem on Soviet strategic capabilities may have a very high priority while one on Soviet agricultural trends in the 1980's will have a lower priority. In terms of short-term crises there will also be another order of priorities ranging from high to low, depending upon how they affect US security or have the potential for getting out of control and impacting on US interests.

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Thus, there are two factors that enter into the development of an appropriate production/collection strategy:

- Estimated duration of the problem.
- ° Priority of the problem.

Each intelligence problem, whether it is one that has been with the community for years, or has only recently become of interest because of some change in world events needs to be looked at in terms of the production/collection capabilities. It then becomes a question of moving resources to put both into some kind of balance.

Different possibilities are:

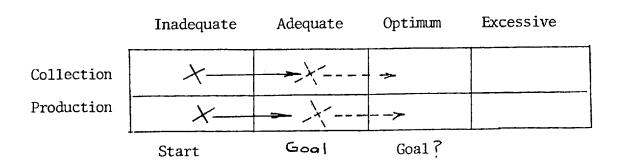
	Inadequate	Adequate	Optimum	Excessive
Collection	X		> ,X	
Production	X		- X	
•	Start		Goal	

In the example above, an intelligence problem impacts on the intelligence community, perhaps a renewed interest in Soviet civil defense, in which initially both collection and production are judged inadequate. The strategy to improve both can be considered a long-term task and the goal is to obtain the "optimum" for both.\*

<sup>\*</sup> For the purposes of this exercise, no attempt has been made to develop precise definitions; "optimum" can be viewed as sufficient resources both in collection and production to give the policy maker answers to the questions posed to the intelligence community with a high degree of confidence that the conclusions are basically correct.

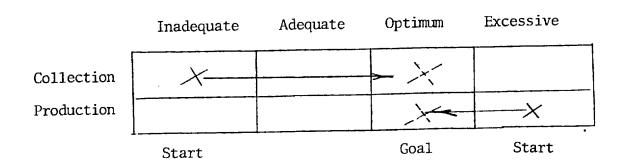
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In other kinds of intelligence problems, especially localized crisis situations, the time-dimension may be so restricted that the goal of the collection/production strategy may be much more limited. In an Mayaquez situation:



Here there is less opportunity for the development of an orderly collection/production strategy. Sharpened requirements and tasking can be initiated but the feedback from them will be dependent upon collection assets already in place or those that can be mobilized on relatively short notice. Production resources can be increased by more overtime, task forces, etc., but some necessary expertise may be missing. Thus, the realistic goal of the collection/production strategy is to move from inadequate to adequate in the short-run. However, with anticipation and luck, collection may prove to be more than adequate.

Other intelligence problems could show other collection/production relationships. One variant seldom recognized could be:



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The above in an example of the production resources being excessive in terms of the amount of information being collected, probably because the subject is important and the desire to create the impression that everything is being done that can be done. In some instances this can lead to duplication and controversy given the inadequate collection (the poor data base). A better solution would be the reallocation of production resources to supporting collection through research aimed at better targeting of collection activities.

#### Reaching the Optimum

How one moved to an "optimum" relationship between collection and production that takes into account a proper trade-off between different sources in the formation of an overall collection/production strategy is dependent upon:

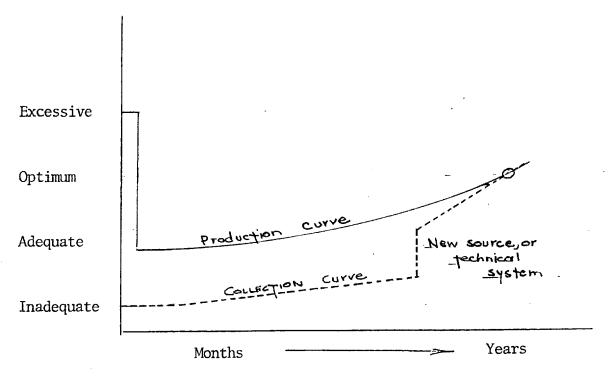
The initial take-off point, in terms of:

- Collection data bases.
- Production resources.
- Estimated duration of the problem.
- ° Priority.
- Relation of the problem to other sets of related problems confronting the intelligence community.

#### Example 1:

To expand on the above in terms of some theoretical examples: Assume a long-term, hard-core USSR intelligence problem which has received a high priority in terms of production resources, but has never had adequate collection. The goal of a theoretical collection/production strategy can be shown as follows:



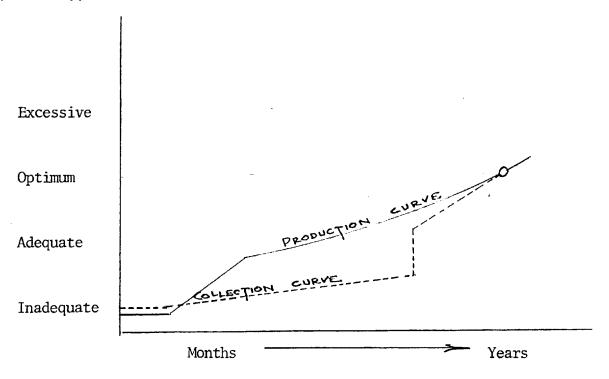


The example diagrammed above shows a quantitative decrease in the production resources devoted to finished intelligence that implies redirection of these resources to more directly supporting and improving the collection effort or to other intelligence problems where they can be more productive in the short-term. Qualitative improvements in production resources would continue through training, selective recruitment and external research, etc. Overall the production capability curve would remain above and ahead of the collection capability curve, but not out of balance as it was initially.

The all-source <u>collection</u> curve illustrates an example where initially there is little improvement in collection, then some gradual increases, a discrete jump that would occur as a result of a new technical system, or acquisition of a major clandestine source, and finally the attainment of an optimum level of both collection and production.

A variant of Example 1 would be the case when both collection and production resources are initially inadequate:

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In this example the same all-source collection curve is used as in the first example, but the production resource curve, initially below the collection curve, changes through recruitment and training to get above the collection curve as rapidly as possible. This must be done to define requirements, identify gaps in intelligence, and to make initial intelligence assessments, even given the inadequate collection.

#### Development of an All-Source Collection -- Trade-offs

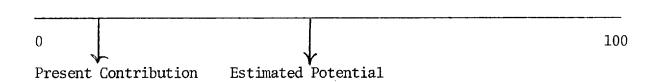
The examples given above presented a total all-source collection curve. Addressed below are some of the factors that must go into developing a collection strategy that is the composite of various collection resources --how trade-offs are made between various collectors. For the purposes of this exercise, collection is divided into: 1) overt; 2) clandestine; 3) technical. Obviously, numerous other breakdowns could be employed.

An initial step is to estimate, given the intelligence problem of concern, the potential of each source for answering the question without dependence on the other two sources:

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Returning to Example 1, a long-term, hard-core problem of high priority on the USSR:

Potential for Improved Overt Collection\*



At present, overt collection makes only a modest contribution toward a satisfactory answer to the question at hand; based on past experience it is recognized that more intensive collection efforts of overt intelligence would improve the value of the overt contribution but there is no probability that overt reporting alone would solve the problem. This can be shown as:

	POTENTIAL FOR IMPROVED OVERT COLLECTION
Excessive	
Optimum	
Adequate	
Inadequate	OVERT COLLECTION CURVE
. 1	Months Years

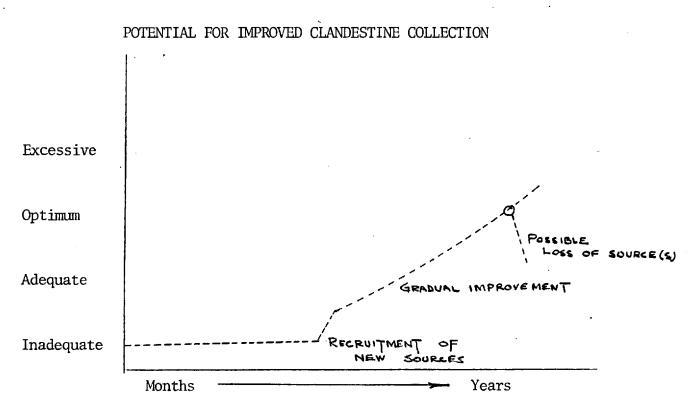
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There is relatively little uncertainity about the curve above; the slope can be changed by more intensive efforts (a function of the priority of the subject), but there is little likelihood of a breakthrough that would alter the need for an all-source collection strategy:

Potential for Improved Clandestine Collection



At present, clandestine collection is capable of making only a small contribution to the solution of the problem; it is judged, however, that clandestine collection, in a realistic sense, given time, has the potential for virtually solving the problem independent of the other two sources. The curve for clandestine reporting could be described as below:

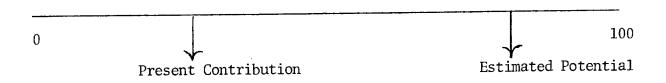


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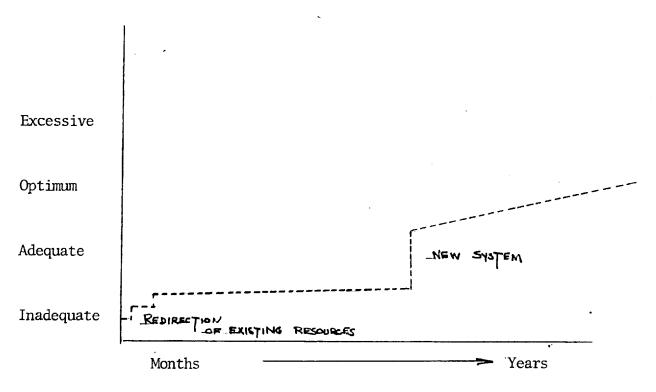
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The shape of the "clandestine curve" is a function of the priority of subject, the "hardness" of the intelligence problem and probably unknowns such as luck. Thus, unlike the shape of the overt collection curve there is a high degree of risk and uncertainty that inhibits trade-offs that depend overly on clandestine collection on long-term, hard-core problems.

Potential for Improved Technical Collection



Potential for Improved Technical Collection



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In this instance there can be some short-term improvements in collection capabilities, but major improvements are dependent upon the development of major new collection systems. The shape of this curve also contains uncertainities and risk especially along the horizonal (time) axis. It is also usually characterized by heavy resource expenditures and may in itself never supply an "optimum" or complete answer by itself for many kinds of intelligence problems such as those related to internal politics. It is a more predictable curve than clandestine reporting potential unless it is combined and dependent upon some measure of "clandestine" operation as well, in which case it becomes highly unpredictable.

# The Mechanics of Trade-offs -- Combining the Potential Collection Curves for an Overall Collection Strategy

The above three collection curves -- overt, clandestine, and technical -- are estimates of what each source could do against the problem alone. The difficult task is to combine the estimated potential of each of the curves into a total collection effort that is more sophisticated than is usually put together. The usual approach is to ignore all trade-offs and simply maximize the collection potential of each of the curves, hoping that in some way there will be enough resources available to attack the high priority problems. A more systematic approach would take into account the following factors:

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- Individual potential of each of the sources.
- Recognition of how various collection sources are mutually supporting; then total value is hopefully more than simply additive.
- Acceptable risk that question may not be answered.
- Need for redundancy to hedge against possible failure or inaccurate estimate of potential of any one source.
- On How collection curves are related not only to the problem in question, but other related questions as well which will affect resources devoted to the problem.

All of the above must be viewed against a resource constraint which will vary according to priorities but which will have reasonably defined boundaries within the total intelligence budget.

The above example has been in terms of a static model; in the real world the potential collection curves would be constantly under review and adjustments would be made in terms of trade-offs as experience was acquired and progress made.

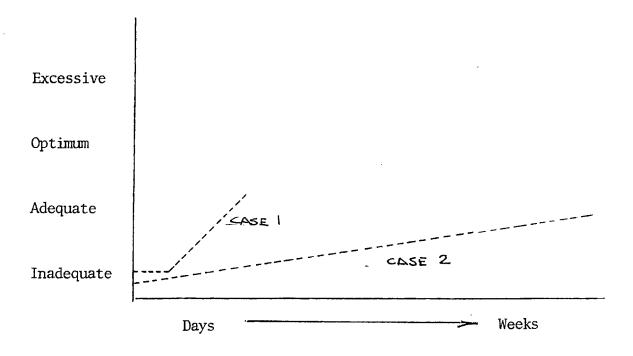
#### Strategies in Crisis Situations

Assume that it is desired to develop a collection strategy against a suddently arising intelligence (crisis) problem of probably short duration. Initially both collection and production resources are inadequate. Given the assumed short-term nature of the intelligence problem, it is probably unrealistic to believe that in most instances either collection or production resources will advance beyond the "adequate" stage.

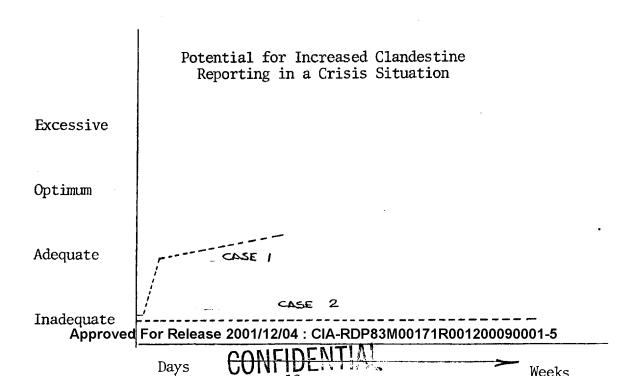
In the short rum, production resources can be increased by overtime, formation of "task forces," and transfer of analysts with past skills that are related to the current problem. Such efforts, however, usually fall short of an optimum level of performance despite the impression that a high level of activity during crisis and "task force" situations may create.

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Potential for Increased Overt Collection in a Crisis Situation



Two cases are shown above. A crisis develops and in case 1, overt collection, e.g., State reporting or even library research (the existing data base) is able to make almost an immediate contribution once new requirements have been identified. In case 2, overt collection can make an increased contribution to the problem, but only after considerable time and, given the nature of the problem, never be able to satisfy the problem completely.

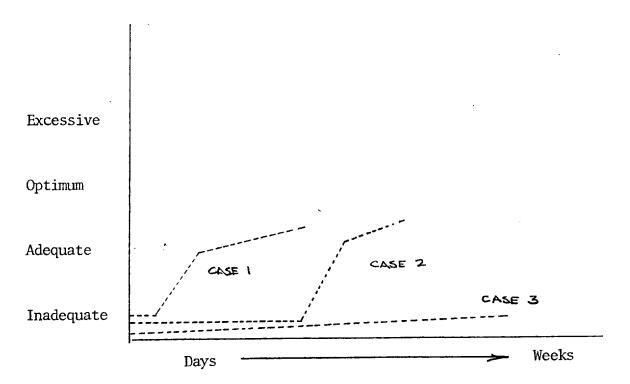


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Again, two cases are presented. In case 1, clandestine sources are available that almost immediately supply information related to the crisis situation. In case 2, no such sources are available and the time necessary to recruit one is far beyond the probable time dimensions of the problem.

Potential for Increased Technical Reporting



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Three different cases are presented above. In case 1, a simple retasking of technical resources through the development of new requirements could lead to an immediate increase of collection that bears on the crisis situation. For this to happen implies that -- as examples -- the SIGINT ground stations are in the right location or that orbital mechanics are appropriate to the task in hand.

In case 2, technical collectors can make a major contribution but only after a time of "tooling up" -- relocating collection assets in one fashion or another.

In case 3, the ability of technical collectors to make an important contribution may be seriously limited because of political considerations, collection sites being in the wrong location, or the inappropriateness of technical resources to the problem in hand. Little more than fine tuning of marginal resources can be accomplished within the probable time limits of the crisis.

Considerations in the Development of Strategies During Crisis Situations

- Operation of the available data base.
- ° Availability of production assets.
- Immediate readjustment in requirements to human and technical collection managers.
- ° Estimation of the priority of the crisis, its possible impact on US interests; its probable duration.
  - oo Given the above what further collection resources can be brought to bear on the problem within what time frame?
- Given the uncertainty of typical crisis situations there is less concern with sophisticated trade-off between collectors and more concern about maximizing the contribution of each collector. Overall, however, the trade-off problem remains. Applying a technical collector to a crisis in one part of the world may result in the loss of intelligence on another intelligence problem of long-term interest.

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